

ILLINOIS POLLUTION CONTROL BOARD  
February 6, 1997

W.R. GRACE & CO. - CONN.,	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 96-193
	)	(Variance - Air)
ILLINOIS ENVIRONMENTAL	)	
PROTECTION AGENCY,	)	
	)	
Respondent.	)	

KATHERINE HODGE AND LADONNA DRIVER, HODGE & DWYER, APPEARED ON BEHALF OF PETITIONER;

CHRISTINA ARCHER APPEARED ON BEHALF OF RESPONDENT.

OPINION AND ORDER OF THE BOARD (by J. Theodore Meyer):

This matter comes before the Board on a petition for extension of variance filed March 15, 1996 by W.R. Grace & Co.-Conn. (Grace). The Board previously granted Grace a variance in W.R. Grace v. IEPA (March 16, 1995), PCB 94-328. Grace filed an amended petition for variance and supplemental request for variance on September 10, 1996. Grace first seeks a two-year extension of variance from the testing requirements of 35 Ill. Adm. Code 218.Subparts QQ as set forth in paragraph 4 of the Board's March 16, 1995 order, as well as in special condition 6(c) of the construction permit. The supplemental request is for variance from the Board's emission control requirements under 35 Ill. Adm. Code 218. Subpart QQ, and from the related recordkeeping and reporting requirements under 35 Ill. Adm. Code 218, Subpart UU and Section 9(b) of the Environmental Protection Act (Act) for its solvent mixer loading operations. (415 ILCS 5/9(b) (1994).) Grace requests the Board to retroactively apply any grant of this supplemental variance request to August 14, 1996. Lastly, Grace requests a seven-month extension of the testing deadline in paragraph four of the Board's March 16, 1996 order, and the same testing deadline in special condition 6(c) of the construction permit for Grace's catalytic oxidizer, because those tests were completed and submitted to the Agency on October 25, 1996. (Tr. at 88, Motion to Amend Compliance Plan at Exhibit 1.)<sup>1</sup> Grace requests the Board to retroactively apply any grant of this last variance request to March 15, 1996.<sup>2</sup>

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<sup>1</sup> The transcript will be referred to as (Tr. at \_\_\_\_.)

<sup>2</sup> Originally, Grace had requested that this variance period be for two years; however, Grace conducted capture efficiency testing and filed the results with the Agency on October 25, 1996. Grace submitted this information in Exhibit 1 of its post-hearing brief.

The Illinois Environmental Protection Agency (Agency) filed its recommendation on October 21, 1996 in which it asserts that an arbitrary or unreasonable hardship would continue to result if the requested relief is denied and therefore recommends that the Board grant the requested relief, subject to certain conditions. (Rec. at 10-11.)<sup>3</sup> Hearing was held October 25, 1996 in Chicago, Illinois before Hearing Officer Deb Frank. Mitch Levine of the Cook County State's Attorney's office was present at hearing; no other members of the public attended. (Tr. at 29.) Grace filed its post hearing brief and supplemental request for variance on November 12, 1996 and the Agency filed its post-hearing response on November 18, 1996.<sup>4</sup>

Initially, the Board notes that it is without authority to grant requests for variance from permit conditions. (Illinois Power Company v. IEPA, (July 19, 1984) PCB 84-75; Landfill, Inc. v. PCB, 74 Ill.2d 541, 387 N.E.2d 258 (1978).) Therefore, the Board denies Grace's request for relief from special condition 6(c) of its construction permit. Grace may petition the Agency for relief from conditions of its construction permit. Regarding the request for relief from the testing requirements for its catalytic oxidizer, the Board notes that Grace's request for relief from the Board's prior order is slightly misguided in that the Board cannot grant a variance from a Board order. Instead, the Board will construe this as another request for extension of the prior variance. Accordingly, the Board will address the requests for extension of the prior variance and the supplemental request for variance only.

Regarding the request for extension of the prior variance, for the reasons set forth below, the Board finds that to require immediate compliance with the capture efficiency testing requirements pursuant to Subparts QQ and UU would continue to impose an arbitrary or unreasonable hardship on Grace. Grace has demonstrated satisfactory progress toward achieving compliance during the term of its prior variance. The Board therefore grants Grace an extension of its prior variance, subject to certain conditions set forth in the attached order. The Board will also grant a wholly retroactive 7-month variance from the testing requirements of Subpart QQ for Grace's catalytic oxidizer.

The Board also finds that an arbitrary or unreasonable hardship which outweighs the environmental impact of operating solvent mixers without emissions controls would result if Grace were not granted a variance from the Board's emission control and recordkeeping and reporting requirements for its solvent mixer loading operations. Therefore the Board will grant Grace a variance from 35 Ill. Adm. Code 218.Subpart QQ and Subpart UU and Section 9(b) of the Act. Finally, the Board finds that unusual circumstances in this matter justify retroactive application for each segment of the variance.

### PROCEDURAL MATTERS

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<sup>3</sup> Grace's September 10, 1996 amended petition for variance and supplemental request for variance will be cited as (Pet. at \_\_\_\_.) and the Agency's recommendation will be cited as (Rec. at \_\_\_\_.).

<sup>4</sup> Petitioner's exhibits will be cited at (Pet. Exh. \_\_\_\_.). Grace's post-hearing brief will be cited as (Grace Br. at \_\_\_\_.) and the Agency's post-hearing brief will be cited as (Agency Br. at \_\_\_\_.).

The Board's responsibility in this matter arises from the Illinois Environmental Protection Act (Act). (415 ILCS 5/1 *et seq.* (1994).) The Board is charged therein with the responsibility of granting variance from Board regulations whenever it is found that immediate compliance with the regulations would impose an arbitrary or unreasonable hardship upon the petitioner. (415 ILCS 5/35(a).) A request for extension of variance may be granted from year to year upon a showing of satisfactory progress during the prior variance. (415 ILCS 5/36(b).) The Agency is required to appear at hearings on variance petitions (415 ILCS 5/4(f)), and is charged, among other things, with the responsibility of investigating each variance petition and making a recommendation to the Board as to the disposition of the petition. (415 ILCS 5/37(a).)

Both parties filed motions to correct the transcript with their post-hearing briefs. The Board grants both motions. On December 18, 1996 the parties filed a joint motion to amend the proposed compliance plan, which the Board grants by adoption of today's opinion and order.<sup>5</sup>

### BACKGROUND

Grace operates a facility located at 6050 West 51<sup>st</sup> Street, Chicago, Cook County, Illinois. The facility was established in 1940, employs about 100 people and is operated pursuant to an air operating permit issued June 16, 1993 by the Agency's Bureau of Air. Grace manufactures container sealant, lubricant fluids and concrete additives at its Chicago facility. (Pet. at 2.)

The container sealant is a rubbery coating material that forms a seal at the crimped ends of cans, and is used by beverage, food and other can coaters. Grace's Chicago facility produces both solvent-based and water-based container sealant. The production of the solvent-based sealants creates solvent fumes. Most solvent fumes are returned to the mixers via in-line condensers; however, volatile organic material (VOM) emissions occur during the mixing and loading process due to the batch nature of the sealant process. These VOM emissions are fugitive in nature and are difficult to safely and effectively capture. Actual VOM emissions from these mixer activities are less than 20 tons per year (TPY); the potential to emit is approximately 75 TPY. (Pet. At 3-5.)

In attempting to reach compliance with subpart QQ of the Board's regulations, Grace worked with the Agency to determine the most appropriate emissions control system for the Chicago facility. The parties realized that Grace could not resolve its emissions problem by the compliance deadline of March 15, 1995 and as a result Grace submitted its original variance petition on November 16, 1994. The Board granted the requested relief and ordered Grace to follow a specific compliance plan. (*W.R. Grace v. IEPA* (March 16, 1995), PCB 94-328 at p.10). As is described in further detail in the compliance section below, Grace was able to meet each compliance point of the Board's order except one, and filed a petition for

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<sup>5</sup> The joint motion will be cited as (Joint Mtn. at \_\_\_\_).

extension of variance, requesting additional time to accomplish the remaining compliance point.

After Grace filed its original petition for variance extension on March 15, 1996, the parties determined that emissions sources equipped with a permanent total enclosure (PTE) would be the most appropriate method for achieving compliance. Grace had substantially completed installation of the PTE equipment when, on June 14, 1996 at 2:50 a.m., an explosion and fire occurred in the solvent mixing area of Grace's facility. (Tr. at 38, Pet. at 12-13.) Grace notified the Agency of the explosion and fire, assembled an investigation team and inspected the solvent mixing area, catalytic oxidizer and the associated ventilation system. Grace determined that a large emission peak from the mixers formed a vapor pocket in the combustion air box of the catalytic oxidizer and caused the subsequent explosion and fire. (Pet. at 13-14.)

Grace requested and was granted a provisional variance from the requirements of 35 Ill. Adm. Code 218, Subpart QQ and Section 9(b) of the Act, to allow Grace to operate its solvent mixers without air pollution control equipment, from July 1, 1996 to August 14, 1996, or until the catalytic oxidizer and ventilation system were repaired. (Grace Container Products v. IEPA (August 1, 1996) PCB 97-24.) Thereafter, Grace sought a second provisional variance, which the Agency denied on September 13, 1996. (Tr. at 15.) On October 25, 1996 Grace submitted to the Agency results of capture efficiency testing. (Tr. at 88.)

Grace is now requesting a three-part variance: (1) a two-year extension of its prior variance for its solvent mixer loading operations; (2) a one-year variance from the emission control, recordkeeping and reporting requirements for its solvent mixer loading operations, and its catalytic oxidizer; and (3) a seven-month extension of variance from the capture efficiency testing requirements for its catalytic oxidizer. Grace has requested that any grant of variance be applied retroactively.

### REGULATORY FRAMEWORK

In determining whether any variance is to be granted, the Act requires the Board to ascertain whether a petitioner has presented adequate proof that immediate compliance with the Board regulations at issue would impose an arbitrary or unreasonable hardship. (415 ILCS 5/35(a).) Furthermore, the burden is upon petitioner to show that its claimed hardship outweighs the public interest in attaining compliance with regulations designed to protect the public. (Willowbrook Motel v. PCB, 135 Ill. App. 3d 343, 481 N.E.2d 1032 (1st Dist. 1977).) Only upon such showing can the claimed hardship rise to the level of arbitrary or unreasonable hardship. In addition, the Board may grant a request for extension of variance on a year to year basis, but only upon a showing of substantial progress toward achieving compliance. (415 ILCS 36(b).)

A variance, by its very nature, is a temporary reprieve from compliance with the Board's regulations, and compliance is to be pursued regardless of the hardship which eventual compliance presents an individual petitioner. (Monsanto Co. v. PCB, 67 Ill.2d 276, 367 N.E.2d 684 (1977).) Accordingly, as a condition to the granting of variance, a variance

petitioner is required to commit to a plan which is reasonably designed to achieve compliance within the term of the variance, unless certain special circumstances exist.

Grace is seeking a two-year extension of its prior variance from the following sections of the Board's regulations:

Section 218.106      Compliance Dates

(c) All emission units which meet the applicability requirements of 218.402(a)(2), 218.611(b), 218.660(a), 218.680(a), 218.920(b), 218.940(b), 218.960(b) or 218.980(b) of this Part, including emission units at sources which are excluded from the applicability criteria of Sections 218.402(a)(1), 218.611(a), 218.620(a), 218.940(a), 218.960(a) or 218.980(a) by virtue of permit conditions or other enforceable means, must comply with the requirements of Subparts H, Z, AA, CC, DD, PP, QQ, RR, or TT of this Part, respectively, by March 15, 1995. Any owner or operator of an emission unit which has already met the applicability requirements of Sections 218.402(a)(1), 218.611(a), 218.620(a), 218.940(a), 218.960(a) or 218.980(a) of this Part on or by the effective date of this subsection is required to comply with all compliance dates or schedules found in Sections 218.106(a) or 218.106(b) above, as applicable.

(35 Ill. Adm. Code 218.106(c).)

Section 218.940      Applicability

(b) Potential to emit:

- 1) A source is subject to this Subpart if it has the potential to emit 22.7 Mg (25 tons) or more of VOM per year, in aggregate, from emission units that are:
  - A) Not regulated by Subparts B, E, F, H, Q, R, S, T (excluding Section 218.486), V, X, Y Z or BB of this Part, or
  - B) Not included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.
- 2) If a source is subject to this Subpart as provided above, the requirements of this Subpart shall apply to a source's miscellaneous formulation manufacturing process emission units which are:
  - A) Not included within any of the categories specified in Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z, AA, BB, CC, or DD of this Part, or

- B) Not included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors wood furniture, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.

(35 Ill. Adm. Code 218.940(b).)

#### Section 218.946 Control Requirements

Every owner or operator of a miscellaneous formulation manufacturing process emission unit subject to this Subpart shall comply with the requirements of subsection (a) or (b) below.

- a) Emission capture and control techniques which achieve an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit, or
- b) An equivalent alternative control plan which has been approved by the Agency and USEPA in a federally enforceable permit or as a SIP revision.

(35 Ill. Adm. Code 218.946)

#### Section 218.948 Testing

- a) When in the opinion of the Agency it is necessary to conduct testing to demonstrate compliance with Section 218.946 of the Part, the owner or operator of a VOM emission unit subject to the requirements of the Subpart shall, at his own expense, conduct such tests in accordance with the applicable test methods and procedures specified in Section 218.105 of this Part.
- b) Nothing in this Section shall limit the authority of the USEPA pursuant to the Clean Air Act, as amended, to require testing.

35 Ill. Adm. Code 218.948)

The extension for variance also included a request for relief from SUBPART UU, Recordkeeping and Reporting, in its entirety. (35 Ill. Adm. Code 218.Subpart UU.)

In short, this request is for a two-year extension from the Board's emission control requirements under 35 Ill. Adm. Code 218, Subpart QQ, which requires sources with the potential to emit 25 TPY or more to reduce VOM emissions by 81% overall from each emission unit. (35 Ill. Adm. Code 218.946.) Compliance is required by March 15, 1995.

(35 Ill. Adm. Code 218.106(c).) In addition, Grace seeks relief from the related recordkeeping and reporting requirements under 35 Ill. Adm. Code 218, Subpart UU and Section 9(b) of the Environmental Protection Act (Act). (415 ILCS 5/9(b) (1994).)

Grace also requests a seven-month extension of the testing deadline found in the Board's March 16, 1995 order. Paragraph four of the Board's March 16, 1995 order states:

Petitioner shall conduct any tests requested by the Agency in the construction permit to establish compliance with Subpart QQ and submit the results of all such tests to the Agency as required in such permit but in no case later than March 15, 1996.

(W.R. Grace v. IEPA (March 16, 1995), PCB 94-328 at p.10).

Grace's supplemental request for variance from the emission control requirements of Subpart QQ above, as well as the recordkeeping and reporting requirements in Subpart UU and Section 9(b) of the Act. Section 9(b) reads:

No person shall:

- b. Construct, install or operate any equipment, facility, vehicle, vessel, or aircraft capable of causing or contributing to air pollution or designed to prevent air pollution, or any type designated by Board regulations, without a permit granted by the Agency, or in violation of any conditions imposed by such permit.

(415 ILCS 5/9(b).)

## COMPLIANCE

### Past Compliance Efforts

Grace states that it has satisfied all but one of the requirements of the Board's order for its prior variance. Specifically: Grace applied for a construction permit on February 21, 1995; certified its installation of the capture system and issued a purchase order for a thermal oxidizer on June 12, 1995; certified the initiation of installation of the oxidizer on December 12, 1995; and certified the start-up of the oxidizer on February 13, 1996. Thereafter, the Agency issued a construction permit to Grace on April 5, 1996. (Pet. At 6-7.) Grace states that these actions satisfy all but paragraph four of the Board's March 16, 1995 order.

Paragraph four requires Grace to conduct and submit any tests requested in the construction permit to establish compliance with Subpart QQ. At hearing, Richard Irean, Environmental Health & Safety Manager at Grace, testified that special condition 6 of the construction permit also required certain testing to demonstrate compliance with 35 Ill. Adm. Code 218.946(a). Grace initially interpreted this special condition to require destruction efficiency testing only, and notified the Agency on January 24, 1996 of its intent to conduct such testing. The Agency informed Grace that both capture efficiency testing and destruction

efficiency testing had to be performed. (Tr. at 36-37, Pet. at 7-9.) The parties discussed options for conducting capture efficiency testing but realized that Grace would not achieve compliance by the March 15, 1996 deadline set forth in the Board's order. As a result, the parties agreed that Grace would perform destruction efficiency testing, and seek a variance extension for the capture efficiency testing. (Tr. at 37, Pet. at 8-12.) Destruction efficiency testing was completed and results were submitted to the Agency by March 15, 1996. (Tr. at 37.) Thereafter, Grace completed capture efficiency testing and submitted those results to the Agency on October 25, 1996. (Tr. at 88.)

### Compliance Options

After destruction testing was performed, the parties determined that a PTE was the most feasible option to meet the required capture efficiency. Thereafter, Grace purchased, installed and activated the PTE. Subsequently, the explosion and fire occurred in its solvent mixing area. (Tr. at 38.) At hearing, Robert Tragert, Senior Regulatory Coordinator with Grace, stated that Grace now plans to study several methods for achieving compliance, including: an enclosed flare or catalytic oxidation with VOM monitors; warning systems capable of diverting emissions to an emergency bypass stack; rupture discs and flame arresters in the duct work; and a dilution box in the duct work leading to the catalytic oxidizer. (Tr. at 78.)

### Future Compliance Plan

In their post-hearing briefs, the parties stated their agreement to a compliance plan. (Pet. PH Br. at 13; Agency PH Br. at 7.) On December 18, 1996 the parties filed a motion to amend the compliance plan which removes the provisions concerning the equivalent alternative control plan. Regarding Grace's solvent mixer loading operations, the amended compliance plan provides that, Grace shall submit outlines for studying compliance options, including catalytic oxidation, enclosed flare and other options. In the event the Agency agrees to a compliance method, Grace will initiate a purchase order for the required equipment by August 1, 1997; install such equipment by April 1, 1998; and conduct all necessary testing and submit such results to the Agency by May 15, 1998. Pursuant to the amended compliance plan, Grace is required to submit monthly progress reports and emissions estimates. In their amended compliance plan, the parties provide an option to petition the Board for an amended order should USEPA involvement render impossible the parties' ability to meet any of the plan's deadlines. (Joint Mtn. at Exhibit A.)

### ARBITRARY OR UNREASONABLE HARDSHIP

Requiring immediate compliance with the regulations at issue, Grace asserts, would impose or arbitrary or unreasonable hardship upon Grace. Specifically, Grace states that it purchased, installed and began operating its catalytic oxidizer, pursuant to the terms of the Board's order and the construction permit, until the explosion on June 14, 1996. (Pet. at 26.) Grace is requesting the variance to allow the parties to assess feasible compliance options, denial of which would force Grace to shut down its facility indefinitely and displace its 100 employees. (Tr. at 42.) Although the trend in coatings favors water-based coatings over



solvent-based coatings, Grace notes that the market is customer driven. Since Grace supplies 98% of the solvent-based coatings for the North American market, Grace states that any disruption of production would have a severe impact on the region's food and beverage industry. (Tr. at 42, 47.)

The Agency agrees that requiring immediate compliance in this case would impose an arbitrary or unreasonable hardship upon Grace. (Tr. at 93.) The Agency states that it is currently unknown whether or not Grace can safely resume operation of its oxidizer; therefore, further study and investigation is needed to evaluate safety issues as well as alternative control options. (Rec. at 9.)

### ENVIRONMENTAL IMPACT

Grace states that its emissions during the requested variance period should be negligible. Grace estimates actual uncontrolled emissions from its mixing and loading operations to be 19.2 TPY, and states that, with the catalytic oxidizer in place, actual emissions were approximately 4 TPY, thus satisfying the 81% reduction requirement under Subpart QQ.

The Agency maintains that Grace's facility is located in the Chicago severe ozone nonattainment area where the reduction of VOM emissions remains an Agency concern; in fact, the Agency is engaged in a massive effort to reduce VOM emissions as required by the federal Clean Air Act. (Rec. at 6.) The Agency argues that the state of Illinois cannot accept any setbacks in the effort to reduce VOM emissions, and that requiring major sources to use Reasonably Available Control Technology is an important component of the State's effort to reach attainment. (Rec. at 6.)

The Agency states that Grace's facility has the potential to emit 75 TPY, but that the actual uncontrolled emissions from the solvent mixers are less than 20 TPY. The Agency also recognizes that Grace has voluntarily undertaken measures to mitigate the environmental impact of its facility. Specifically, Grace has 1) modified its coating process to control VOM emissions; 2) installed more efficient condensers to reflux emissions; 3) initiated a dedicated chiller for condenser cooling; 4) enhanced the effectiveness of mixer cooling jackets; and, 5) installed tight fitting slide gate valves at the mixer hatches. (Rec. at 6.)

The Agency recognizes that the requested variance will allow Grace to emit uncontrolled VOM emissions during the 1997 ozone season which is a significant environmental impact; however, the Agency notes that prior to installation of its oxidizer, Grace's emissions were uncontrolled, and its VOM emissions have remained at the 20 TPY level. Therefore, the Agency reasons, there will be no additional detrimental environmental impact during the term of the requested variance. The Agency requests that Grace continue to use its process modifications to mitigate environmental impact during the variance period. (Rec. at 7.)

### CONSISTENCY WITH FEDERAL LAW

Grace asserts that a grant of the requested variance would not violate federal law. Grace further states that the requirements of Section 110(a) of the Clean Air Act, and 40 C.F.R. 51 have been satisfied in that the parties have held a hearing, allowing for the opportunity for public participation. (Pet. at 31-33.)

The Agency states that, pursuant to Section 35 of the Act, the Board may grant variances only if they are consistent with the provisions of the Clean Air Act. (42 U.S.C. 7401 *et seq.*) The Agency reports that a variance from 35 Ill. Adm. Code Subpart QQ is not required to be submitted to the United States Environmental Protection Agency (USEPA) as a State Implementation Plan (SIP) revision because Subpart QQ has not been adopted by USEPA into Illinois' SIP. (Rec. at 7.) However, the Agency states, if the SIP is approved before the expiration of any grant of the requested variance, the Agency will submit the variance to USEPA as a SIP revision. The Agency further states that it has asked USEPA Region V to assist in evaluating Grace's compliance plan due to the complex nature of the technical issues involved. Keeping USEPA apprised of relevant issues well in advance of any submittal is important so that any concerns can be addressed as efficiently as possible. (Rec. at 8.)

### DISCUSSION

As a preliminary matter, the Board notes that, due to the explosion and fire, Grace's request for variance is rather unusual and a bit confusing. In examining the record, we find that Grace is first requesting a two-year extension of its prior variance as to its solvent mixer loading operations. In addition, Grace is requesting a one-year extension of the testing requirements in its prior variance as to its oxidizer; however, Grace conducted and submitted those tests in October 1996 so its variance request is actually for only seven months (March 15, 1996 to October 25, 1996) and is wholly retroactive.

Secondly, because of the fire and explosion, Grace is requesting a new variance from emission control requirements of 35 Ill. Adm. Code 218.Subpart QQ, as well as the recordkeeping and reporting requirements of Subpart UU and Section 9(b) of the Act, for its solvent mixer and oxidizer. Grace requests that this variance begin August 14, 1996 and extend until May 15, 1998, the date in the parties' amended compliance plan by which Grace agrees to conduct and submit testing. The Board will address each request separately.

#### Request for Extension of Prior Variance

The Board finds the hardship that existed during the prior variance continues to exist for Grace. During the prior variance, Grace chose to install a catalytic oxidizer to capture fugitive VOM emissions from its mixing and loading process. Although destruction efficiency testing had been completed on the oxidizer, efficiency testing remained to be conducted when Grace's catalytic oxidizer suffered an explosion and fire. Denial of the variance request would result in the virtual elimination of solvent-based coatings in North America since Grace supplies 98% of solvent-based coating to that market. To require Grace to comply with the testing requirements of Subparts QQ and UU, before it has discovered and implemented a feasible RACT for its solvent mixing and loading operations would impose an arbitrary or

unreasonable hardship that outweighs the environmental impact represented by fugitive emissions below 20 TPY during the variance.

The Board further finds that Grace has made substantial progress towards achieving compliance during the term of its prior variance. As previously mentioned, Grace achieved every compliance milestone in the Board's previous order except for the testing requirement. Grace continues to work closely with the Agency to determine the proper RACT equipment for its mixing and loading activities, and the parties have agreed to an aggressive compliance plan. The Board therefore grants Grace an extension of its prior variance from the testing requirements in 35 Ill. Adm. Code 218.106(c), 218.940(b), 218.946, 218.948 and 218. Subpart UU for Grace's solvent mixer loading operations. This variance shall be partially retroactive. The Board also grants a seven-month extension of variance from these testing requirements for Grace's catalytic oxidizer. As explained more fully below, the Board finds that sufficiently unusual circumstances exist in this matter to justify these retroactive variances.

#### Supplemental Request for Variance

The explosion and fire that occurred in Grace's solvent mixing operation caused Grace to seek additional relief from the Board; namely, Grace requests variance from the emission control requirements and the recordkeeping and reporting requirements Subparts QQ and UU for its solvent mixer loading operations. The Board finds that requiring Grace to comply with these regulations before it can adequately investigate viable alternative control options would impose an arbitrary or unreasonable hardship which outweighs the environmental impact represented by less than 20 TPY of fugitive emissions. Therefore, the Board grants Grace a one year variance from the emission control requirements of 35 Ill. Adm. Code 218 Subpart QQ, and the recordkeeping and reporting requirements of 35 Ill. Adm. Code 218 Subpart UU for its solvent mixer loading operations. This variance shall begin retroactively on August 14, 1996.

#### Retroactive Application

Grace requests that the two-year extension of its prior variance as to its solvent mixer loading operations begin on March 15, 1996. Its request for a seven-month variance as to its catalytic oxidizer begins March 15, 1996 and ends October 25, 1996 and is therefore wholly retroactive. In its supplemental request for variance, Grace asks that the term of variance begin on August 14, 1996 and end on August 14, 1997.

The Board has determined as a general rule that, absent unusual or extraordinary circumstances, the Board renders a variance as effective on the date of the Board order in which the variance issues. (LCN Closers, Inc. v. IEPA (July 27, 1989), PCB 89-27, 101 PCB 283; Borden Chemical Co. v. IEPA (December 5, 1985), PCB 82-82, 67 PCB 3.) The Board stated that the reasoning behind the general rule is to discourage untimely filed petitions for variance, and because failure to request relief in a timely manner is a self-imposed hardship. (Fedders-USA v. IEPA (April 6, 1989), PCB 86-47, 98 PCB 15; DMI v. IEPA (February 23, 1987), PCB 88-132, 96 PCB 185.) As stated by the Appellate Court, "[t]he Board can provide relief from the hardship of immediate compliance and yet retain control over a

polluter's future conduct by granting a temporary variance". Monsanto Co. v. Pollution Control Board, 67 Ill.2d 276, 288 (1977). A retroactive variance, however, would eliminate the Board's ability to retain any control over the polluter's activity during the term of the variance. (Marathon Oil Company v. IEPA (May 16, 1996), PCB 94-27.)

Although the Board does not generally grant variances retroactively, the Board has granted variances with "retroactive" inception dates upon specific justification. (Deere & Company, John Deere Harvester, East Moline Works v. IEPA (September 8, 1988), PCB 88-22, 92 PCB 91.) The Board has made a variance retroactive to the date on which the Board would have rendered a decision where there was a procedural delay of the proceeding through no fault of the petitioner, or as the result of confusion over interpretation of federal regulations. (Allied Signal, Inc. v. IEPA (November 2, 1989), PCB 88-172, 105 PCB 7; Morton Thiokol Inc., Morton Chemical Division v. IEPA (February 23, 1989), PCB 88-102, 96 PCB 169; Union Oil Company of California v. IEPA (February 20, 1985) PCB 84-66, 63 PCB 75.) The Board has also granted retroactive variance where there are unavoidable, special or extraordinary circumstances. (American National Can Company v. IEPA (August 31, 1989), PCB 88-203, 102 PCB 215 (variance effective 11 days after filing where petitioner diligently sought compliance and there was no reason to anticipate need for variance until it was too late to file); Classic Finishing Company, Inc. v. IEPA (June 10, 1986), PCB 84-174(B), 79 PCB 229 (variance effective on date of filing first amended petition, where there was a change in company ownership, an ongoing compliance effort that resulted in petition updates and eventual compliance before the date of the Board decision, and due to the nature of the materials involved and the technology-forcing nature of the underlying regulation); (Deere & Company, John Deere Harvester, East Moline Works v. IEPA (September 8, 1988), PCB 88-22, 92 PCB 91 (variance effective 20 days before filing, where petitioner diligently sought relief and good faith efforts appeared to result in compliance before the Board decision).)

In reading the record, the Board finds that the events surrounding Grace's attempts to install and activate RACT equipment which was subsequently damaged by undetectable emissions peaks are sufficiently unusual circumstances to warrant retroactive application of this variance request. The Board finds that Grace demonstrated a good faith effort in timely filing its petition for variance extension; in complying with the Board's previous order; in conducting its investigation of the explosion; in obtaining a provisional variance; in achieving eventual compliance with the prior variance by submitting capture efficiency testing results to the Agency as soon after the explosion as appears possible; and in filing its amended petition for variance. Therefore, the Board will grant Grace the above-described variances with their respective retroactive start dates.

The Board notes, both at hearing and in their proposed compliance plan, the parties' concern that any USEPA involvement may render impossible their ability to meet certain agreed upon deadlines. (Tr. at 84, Joint Mtn. at Exhibit 1, page 5.) Rather than include any requirements contingent upon this possibility, the Board simply reminds the parties that they can petition the Board to amend its order if necessary.

This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

### ORDER

For its facility located at 6050 West 51<sup>st</sup> Street, Chicago, Cook County, Illinois petitioner, W.R. Grace & Co.-Conn. (Grace), is hereby granted a two-year extension of variance from the Board's testing requirements under 35 Ill. Adm. Code 218.106(c), 218.940(b), 218,946, 218.948 and 218.Subpart UU as to its solvent mixer loading operation. This variance shall commence retroactively on March 16, 1996 and terminate on March 16, 1998. Grace is also granted a variance from the testing requirements under 35 Ill. Adm. Code 218.106(c), 218.940(b), 218,946, 218.948 and 218.Subpart UU as to its catalytic oxidizer. This wholly retroactive variance shall commence on March 15, 1996 and terminate on October 25, 1996. Finally, Grace is granted a variance from the Board's emission control requirements under 35 Ill. Adm. Code 218, Subpart QQ, and the related recordkeeping and reporting requirements under 35 Ill. Adm. Code 218, Subpart UU and Section 9(b) of the Environmental Protection Act (Act) as to its solvent mixer loading operations and its catalytic oxidizer. (415 ILCS 5/9(b) (1994).) This variance shall commence retroactively on August 15, 1996 and terminate on May 15, 1998.

This grant of variance is subject to the following conditions:

- A. Grace shall submit by January 15, 1997, detailed outlines for studying other possible methods of compliance, as set forth in subsection (1) below.
  - 1. The outlines shall detail studies of catalytic oxidation, enclosed flare and other options, as appropriate for control devices, pursuant to the following:
    - a. A catalytic oxidizer study shall, at a minimum, include information as to feasibility and safety concerns regarding use of the following:
      - (1) VOM monitors, or a series of monitors in the duct work leading to the catalytic oxidizer;
      - (2) Warning systems capable of diverting emissions that exceed the lower explosive limit to an emergency bypass stack;
      - (3) The installation of rupture discs and flame arresters in the duct work leading to the catalytic oxidizer; and,
      - (4) The effects of installation of a dilution box in the duct work leading to the catalytic oxidizer.

- b. An enclosed flare study shall provide information on all aspects of the use of a flare for emissions control.
  - c. Grace may also submit outlines for any other control device it wishes to study.
- 2. Each such outline shall include all test methods and procedures to be used during the studies, all appropriate emission factors and a timeframe for completion of the studies.
- 3. Each such outline shall be subject to modification and approval by the Agency prior to commencement of the studies. The studies shall include any Agency modifications. The Agency shall complete evaluation and approval of each outline no later than February 1, 1997.
- 4. Grace shall submit the conclusions reached during the course of the investigations, including all supporting documentation, test methods and procedures to the Agency as they become available, but in any event, no later than July 1, 1997. Upon receipt the Agency shall evaluate the conclusions and either concur or reject the proposed compliance method as expeditiously as possible, but in any event, no later than July 15, 1997.
- 5. In the event that the Agency concurs with the proposed compliance method, the following items shall be completed:
  - a. A purchase order for control equipment shall be initiated by August 1, 1997;
  - b. Control equipment shall be installed and operational by April 1, 1998; and,
  - c. All necessary testing of the control equipment shall be conducted and submitted to the Agency by May 15, 1998.
- B. During the pendency of the variance, Grace shall submit to the Agency by the first of each month, monthly progress reports documenting progress made on the studies delineated in paragraph A above, as well as monthly emissions estimates. These progress reports, outlines and studies shall be submitted to:

Illinois Environmental Protection Agency  
 Bureau of Air  
 2200 Churchill Road, P.O. Box 19276  
 Springfield, Illinois 62794-9276  
 Attn: Compliance Section Manager

and

Illinois Environmental Protection Agency  
Bureau of Air  
1701 First Avenue  
Maywood, Illinois 60153  
Attn: Compliance Section Manager

- C. Grace shall submit all required construction and operating permit applications, including an amendment to its pending Clean Air Act Permit Program (CAAPP) application to the Agency's Permit Section Manager at the Springfield address in Paragraph B, as required to meet all applicable regulatory requirements under the Act and the deadlines in this variance.
- D. By April 1, 1998, Grace shall comply with 35 Ill. Adm. Code 218, Subpart QQ and by May 15, 1998 with Subpart UU.

IT IS SO ORDERED.

If Grace chooses to accept this variance subject to the above order, within forty-five days of the grant of variance, Grace must execute and forward the attached certificate of acceptance and agreement to:

Tina Archer  
Division of Legal Counsel  
Illinois Environmental Protection Agency  
P.O. Box 19276  
2200 Churchill Road  
Springfield, Illinois 62794-9276

Once executed and received, that certificate of acceptance and agreement shall bind Grace to all terms and conditions of the granted variance. The 45-day period shall be held in abeyance during any period that this matter is appealed. Failure to execute and forward the certificate within 45 days renders this variance void. The form of the certificate is as follows:

CERTIFICATION

I (We), \_\_\_\_\_, hereby accept and agree to be bound by all the terms of the Order of the Pollution Control Board in PCB 96-193, February 6, 1997.

\_\_\_\_\_  
Petitioner

\_\_\_\_\_  
Authorized Agent

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Title

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Date

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1994)) provides for the appeal of final Board orders within 35 days of the date of service of this order. The Rules of the Supreme Court of Illinois establish filing requirements. (See also 35 Ill. Adm. Code 101.246 "Motions for Reconsideration.")

IT IS SO ORDERED.

Board Member Marili McFawn concurred.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the \_\_\_\_ day of \_\_\_\_\_, 1997, by a vote of \_\_\_\_\_.

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Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board